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MANUAL FOR COMMUTE, A FORTRAN PROGRAM FOR SYMBOLIC EVALUATION OF COMMUTATORS AND CORRELATION FUNCTIONS

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PROGRAM SUMMARY

Title of program: COMMUTE

No. of magnetic tapes required: none

Catalogue number: ACKS

Other peripherals used: DISK

Computer: IBM 3033, IBM 370/168, PDP 11/45, VAX 11/780

No. of cards in combined program and test deck: 5219

Operating system: OS/MVS/, RSX-11/D, VAX/VMS V2.1

Keywords: many body theory, equations of motion, correlation functions, symbolic evaluation

Programming language used: FORTRAN IVH EXTENDED, FORTRAN IV PLUS

Nature of the physical problem

COMMUTE is a FORTRAN program that can be used for the symbolic evaluation of equations of motion of operators or correlation functions. It can use symmetry operations to reduce the final number of terms and in some specific cases, it expresses correlation functions in terms of known functions. It is extremely useful for the calculation of the coefficients in the short-time expansion of a correlation function.

High speed storage required: 300 K (IBM), 32 K (PDP, VAX)

No. of bits in a word: 32 (IBM, VAX), 16 (PDP)

Overlay structure: no (IBM, VAX) yes (PDP)

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